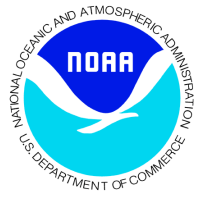




# National Weather Service - Des Moines, IA

## 2012 Spotter Training

### Course Notes and Registration Information



## PREPARATION BEFORE SPOTTING

- A pro-active approach to spotting *before* storms enter a county is vital to the warning process.
- Stay informed before warnings are issued for your county utilizing radar data and National Weather Service (NWS) Products.
- Don't wait for a heads up call from the NWS. Time will not always permit this ahead of time.

### Sources of Information

- National Weather Service Des Moines  
[weather.gov/desmoines](http://weather.gov/desmoines) or [mobile.weather.gov](http://mobile.weather.gov)
- Storm Prediction Center  
[spc.noaa.gov](http://spc.noaa.gov)
- Iowa State University - Iowa Environmental Mesonet  
[mesonet.agron.iastate.edu](http://mesonet.agron.iastate.edu)
- Mid-Iowa Skywarn Association  
[www.midiowaskywarn.com](http://www.midiowaskywarn.com)
- National Association for Amateur Radio (ARRL)  
[www.emergencyradio.org](http://www.emergencyradio.org)
- NOAA All-Hazards Weather Radio

### What to Report

- **Strong Winds or damage.** Winds 50 mph or greater. Any tree or structure damage, either presently occurring or in the past.

< 58 mph - Whole trees in motion; twigs and small limbs break off trees

58-72 mph - Severe Thunderstorm criteria begins. Shingles torn off or minor structural damage; breaks off large limbs; pushes over shallow rooted trees

73-112 mph - Substantial roof and structural damage; windows broken; trailer houses overturned; large trees uprooted

113+ mph - Roofs torn off houses; weak buildings and trailer houses destroyed

- **Large Hail.** Severe Thunderstorm criteria  $\geq 1$  inch diameter. Report hail of *any* size. Always report in terms of coins, or actual measurements. Avoid reporting as "marbles" which could be many sizes.
- **Wall Clouds and Funnel Clouds.** Rotation, movement and consistency of inflow are important
- **Tornadoes**
- **Flash Flooding.** Water standing on, or flowing over road. Roads washed out. People or vehicles swept away by flowing water. Rivers or streams out of their banks. Heavy rains in excess of an inch per hour.
- Snowfall or ice accumulations and hazardous road condition reports are also appreciated.

## How to report

- 1-800-SKYWARN (759-9276)  
Program into your phone today!
- Text or email, including pictures and video, to [dmx.spotterreport@noaa.gov](mailto:dmx.spotterreport@noaa.gov) or (515) 240-5515
- Twitter (#iawx hashtag) and Facebook
- Amateur Radio at KØDMX
- Give location as precisely as possible. Give start and end time of event. Be sure to differentiate between event time and report time.
- Provide frequent updates and don't assume NWS is aware of event, even if warning is in effect

REMEMBER, SAFETY FIRST! TRY TO SPOT IN PAIRS AND STAY IN YOUR VEHICLE, THE SAFEST PLACE FROM HAIL AND LIGHTNING. DO NOT DRIVE INTO WATER OF ANY DEPTH, AND HAVE A PLANNED ESCAPE ROUTE.

## Wall Clouds

- Suggest inflow/updraft
- Attached to rain-free cloud base
- Maintain position with respect to rain
- May contain tail cloud that slopes upward from precipitation into storm

## Shelf Clouds

- Suggest downdraft/outflow
- Leading edge of gust front, moving away from rain
- Slope downward away from precipitation area
- Often with squall line

### OPTIMUM SPOTTER VIEWING ANGLE

- Wall clouds and tornadoes are typically on the right or front side of storm with respect to their movement. This makes knowledge of storm motion important!
- Safest and best viewing angle is with the storm moving to your right as you look at it (Right Hand Rule).
- Viewing on the left or rear flank of the storm, or with the storm moving to your left, often results in poor viewing with line of sight obscured by rain and/or hail.

**Tornado:** “A violently rotating column of air attached to a nearby shower or thunderstorm, *and* in contact with the ground. Visible cloud or appearance of funnel not needed.”

### FUNNEL CLOUDS VS. TAIL CLOUDS

- Funnel clouds rotate, usually rapidly, extending downward from cloud base.
- As opposed to scud clouds, funnel clouds typically have a laminar or smooth appearance
- Funnel clouds are located near updraft, usually vertical, and several orders of magnitude smaller than parent wall cloud.
- Tail clouds are often horizontal and funnel-like, but do not rotate. They should not be confused with actual funnel clouds for these reasons.

*Who can make spotter training better each year? You, that's who! Local pictures and video of wall clouds, funnel clouds, large hail and other features provide examples that Iowa spotters are more likely to see. New pictures and video also make the talk more interesting. Send your pictures and/or video to [dmx.spotterreport@noaa.gov](mailto:dmx.spotterreport@noaa.gov). Your contribution could end up in our spotter newsletter or next year's presentation.*

## Spotter Registration Information

Spotter registration can be completed on-line this year through the Mid-Iowa Skywarn Association. Please visit <http://www.midiowaskywarn.com> and visit the Action items for spotters at the top of the page. Register as a spotter or update your registration.

If you do not have internet access, please send a short note or post card with the information below to:

SVN Spotter Program  
NOAA / National Weather Service  
9607 NW Beaver Dr.  
Johnston, IA 50131

- Name
- Mailing address
- Residence address (if different)\*
- Phone numbers available to spot (home, work, cell)

\* Residence address is needed to plot your location so we can cross-reference your information to what we are seeing on radar

Once your information has been received, your application will be confirmed and spotter number assigned via return e-mail or postal mailing. Please allow up to 2-4 weeks for a reply.